

APPLICATION FOR UNITED STATES LETTERS PATENT

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Appliance Holder

This application is a continuation-in-part of co-pending application Ser. No. 29,171,798, which was filed on November 26, 200 and issued as US Patent No. D481930 November 11, 2003.

FIELD OF THE INVENTION

The present invention relates generally to a device for holding objects and more particularly to a wall mounted clamps suitable for household and industrial use and capable of releasably holding several objects. Furthermore, individual clamps of the present invention may be easily inserted or removed.

BACKGROUND

One effect of consumerism in our society is that individuals acquire numerous devices, each of which needs to be stored in a convenient place. For smaller items and objects with regular outlines, shelves and cabinets are adequate. But, when the objects have an unusual or bulky outline or when the items are ones that are used daily, special holding or storing devices are needed.

In the past a variety of devices have been created that attempt to satisfy the need for holding frequently used or bulky objects. Examples are briefly described below.

U.S. Patent No. 3,471,987, issued on October 14, 1969 to Yelsma, discloses a device specifically designed for use in the construction industry to hold and position items such as reinforcing bars and pipes. The Yelsma holder has a holding portion that is substantially C-shaped and two diverging leg structures that form a base portion. The leg structures are permanently attached to the holding portion and further include a horizontal brace or support to maintain their spacing. The C-shape of the holding portion forms bendable arms that flex to

accommodate the diameter of a held item. Furthermore, at terminal ends of the bendable arms are guiding and securing flanges. One flange is directed inward, toward the center of the holding portion while the other flange is directed outward, away from the center of the holding portion. While the Yelsma device excellently serves the purpose for which it was designed, it is limited and cannot be easily adapted to other uses. Each clamp has its own separate base upon which no additional clamps may be attached or inserted. The clamps cannot move relative to the base nor may they be separated from the base without destroying the device.

U.S. Patent No. 4,159,773, issued on July 3, 1978 to Losenno, discloses a beautician's tool hanger. The Losenno device is designed to be a wall mounted structure that holds the beautician's tools a distance from the wall. Included in this device is an inverted J-shaped support structure that may be removably attached to a wall mounted base. Attached to the inverted J-shaped support structure is a horizontal arm member with pressure clips that are permanently attached such as by riveting or spot welding. While the Losenno patent teaches that additional pressure clip members may be attached to the horizontal arm member, the horizontal arm member must be extended and the additional pressure clips attached at the point of manufacture. Additional clips may not be added by the end user. Furthermore, by its design, the entire apparatus, support structure and horizontal arm member with attached clips, is removable from the base. Thus, individual clips may not be removed without substantial effort. Finally, the pressure clip of Losenno cannot independently move relative to the wall mounted base.

U.S. Patent No. 4,061,299, issued on December 6, 1977 to Kurosaki, discloses an electrical cord holder. The Korusaki cord holder comprises a circular clamp body with two opposed arcuate arms and leg members attached to lower ends of the arms. The c portion connecting the two opposed arms are connected near the attached leg members is a thin-walled

hinge. At terminal ends of the opposed arms are mutually engageable pawls. These mutually engageable pawls serve to secure the terminal ends of the opposed arms together thereby quasi-permanently clamping the electrical cord within the clamp body. Kurosaki further teaches the use of a base plate to hold and secure the leg members of this holder, however the clamp devices are not movable relative to the base plate nor can additional clamp devices be inserted without further modification of the base plate.

U.S. Patent No. 4,240,604, issued on December 23, 1980 to Brach, discloses a multipurpose closeable clamp. In its open configuration the Brach clamp has a W-shape, however in its closed configuration the clamp is circular. The Brach clamp has two arcuate arms attached to each other by a thin-walled flexible hinge. These arms are supported and attached at a central location to a resilient arcuate fastening extension. Brach teaches that the fastening extension may be removably attached to a wall mounted base. The fastening extension fits into the wall mounted base in a swallow-tail joint configuration. While an ingenious device, the Brach clamps each have a separate wall mounting base and this patent does not contemplate the possibility of inserting additional clamps to a wall mounting base. Furthermore, the clamps are not movable relative to the wall mounting base and cannot be repositioned.

U.S. Patent No. 4,624,432, issued on November 25, 1986 to Salacuse, and U.S. Patent No. 4,728,071, issued on March 1, 1988 also to Salacuse, both disclose further improvements upon the Brach patent, but do not solve any of the above discussed problems.

U.S. Patent No. 4,527,760, issued on July 9, 1985 to Salacuse, is another improvement on the Brach patent, but with a redesigned base. As above described, the Brach patent discloses a clamping device that is permanently mounted onto a surface in a single orientation, the Salacuse '760 patent, however, provides a mounting structure that allows the clamp device of the Brach

patent to be mounted at two orthogonally different orientation. This is accomplished by providing a mounting body forming a compartment defined by side walls of the body, the side walls being preferably cylindrical and a front wall; a means for connecting the body to a generally vertical surface such as a wall and substantially parallel to the front wall; a snap-clamp device; a mounting member in abutting rotational relationship with the front wall, the mounted member being connected to said snap clamp device; a fastener connected to said mounting member, the fastener including a shaft having opposed ends with one of the ends connected to and extending substantially perpendicular from a surface of the mounting member and two perpendicular pairs of locking arms connected to the other of the ends of the shaft and extending substantially at right angles relative to the shaft. The front wall of the compartment has a central passage substantially normal to the inner and outer surfaces and further forms two pairs of slots connected to the central passage and adapted to receive the two pairs of locking arms and shaft. Each of the four locking arms includes a tapered surface having an edge extending substantially at right angles relative to the shaft. However, the redesigned base only allows for rotational repositioning of the clamping element, and not horizontal or vertical repositioning. Furthermore, as in the above patents, this device is designed to hold a single item and additional holding elements may not be added or removed as needed.

U.S. Patent No. 4,871,074, issued on October 3, 1989 to Bryson et al., discloses a rack used to hold appliances and the like. The Bryson rack has keyhole shaped slots in two parallel spaced support surfaces, a large diameter slot directly above a smaller diameter slot, which receives hair appliances such as hair dryers and curing irons. The support surfaces are attached to a mounting structure. While this rack adequately serves its intended purpose, it does not allow holding elements to be removed or inserted, as needed. Furthermore, the holding elements are

permanently fixed into place with no possibility of repositioning relative to the mounting support. Finally, the holding elements of the Bryson device are not flexible and cannot accommodate a side variety of differently sized items.

While the above mentioned devices are suited for their intended usage, none of the disclosed devices teaches a hair appliance holder including a wall mounting base of suitable height to allow the device to grip a wide variety of sizes and shapes; a plurality of sets of arms that are in movable relation to each other and the wall mounting base, said arms designed such that they are capable of gripping a wide variety of sizes and shapes of hair care appliances. Additionally, there is a need for a device in which additional holding elements may be inserted or removed, as needed. In as much as the art is relatively crowded with various hair care appliance holders, it can be appreciated that there is a continuing need for and interest in improvements to such hair care appliance holders, and in this respect, the present invention addresses this need and interest.

SUMMARY OF INVENTION

It is an object of the present invention to provide a device that is capable of holding a plurality of different items.

It is another object of the present invention to provide a device in which holding elements are movable relative to a base element.

It is still another object of the present invention to provide a device in which the holding elements are independently movable relative to each other and to the base element.

It is yet another object of the present invention to provide a device in which holding elements may be easily inserted into the base element.

It is still yet another object of the present invention to provide a device in which holding elements may be easily removed from the base element.

It is an additional object of the present invention to provide a device in which a base element has a channel that receives holding elements and allows the holding elements to be
5 freely repositioned relative to the base element.

The novel features that are considered characteristic of the invention are set forth with particularity in the appended claims. The invention itself, however, both as to its structure and its operation together with the additional object and advantages thereof will best be understood from the following description of the preferred embodiment of the present invention when read
10 in conjunction with the accompanying drawings. Unless specifically noted, it is intended that the words and phrases in the specification and claims be given the ordinary and accustomed meaning to those of ordinary skill in the applicable art or arts. If any other meaning is intended, the specification will specifically state that a special meaning is being applied to a word or phrase. Likewise, the use of the words "function" or "means" in the Description of Preferred
15 Embodiments is not intended to indicate a desire to invoke the special provision of 35 U.S.C. §112, paragraph 6 to define the invention. To the contrary, if the provisions of 35 U.S.C. §112, paragraph 6, are sought to be invoked to define the invention(s), the claims will specifically state the phrases "means for" or "step for" and a function, without also reciting in such phrases any structure, material, or act in support of the function. Even when the claims recite a "means for"
20 or "step for" performing a function, if they also recite any structure, material or acts in support of that means of step, then the intention is not to invoke the provisions of 35 U.S.C. §112, paragraph 6. Moreover, even if the provisions of 35 U.S.C. §112, paragraph 6, are invoked to define the inventions, it is intended that the inventions not be limited only to the specific

structure, material or acts that are described in the preferred embodiments, but in addition, include any and all structures, materials or acts that perform the claimed function, along with any and all known or later-developed equivalent structures, materials or acts for performing the claimed function.

BRIEF DESCRIPTION OF THE DRAWING

Figure 1 is a perspective view of the present invention.

Figure 2 is an exploded view of the present invention.

Figure 3 is a section view along line 3 in Figure 1.

Figure 4 illustrates insertion of a clamp component into the base piece according to the present invention.

Figure 5 is a back perspective view of a clamp component according to the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Referring not to the drawings an in accordance with the above and other objects, a multi-purpose apparatus 1 useful for holding elongated objects away from surface and capable of repositioning the held objects is provided. Furthermore, the apparatus 1 of the present invention is capable of insertion and removal of additional holding elements.

The apparatus 1 includes a surface mounting base element 10 and at least one spring pressure holding elements(s) or clamp component(s) 50 that are adapted to be received by the base element 10. The surface mounting base 10 has a top portion 20 and a bottom portion 30 that are held in fixed relationship to each other by first and second end pieces, 15 and 16. First end piece 15 attaches to a first end 21 of the top portion 20 and to a first end 31 of the bottom portion 30. Second end piece 16 attaches to a second end 22 of the top portion 20 and to a second end 32 of the bottom portion 30. Preferably, the first end 21 of the top portion 20 is

attached near a bottom edge of the first end piece 15. Likewise, preferably the second end 22 of the top portion 20 is attached near a top edge of the second end piece 16, while the second end 32 of the bottom portion 30 is attached near a bottom edge for the second end piece 16. While the end pieces, 15 and 16, may be formed to be flush with a front surface 23 of the top portion 20 and a front surface 33 of the bottom portion 30, in its preferred embodiment, the apparatus 1 of the present invention contemplates that the end pieces 15 and 16 project substantially in front of the front surfaces, 23 and 33, of the top and bottom portions 20 and 30. While the end pieces, 15 and 16, may be formed into practically any shape, in its preferred embodiment, they are formed into an elongated D-shape.

There is a back portion 40 that attaches to a back side of the base element 10. Attached to an inner surface of the first and second edge pieces, 15 and 16, and extending between the base element 10 and the back portion 40 are at least one mounting tab(s) 17 each with at least one included mounting apertures(s) 18. The at least one mounting aperture(s) 18 is designed to receive mounting means such as drywall screws, nails and the like. In the preferred embodiment, it is contemplated that a single mounting tab 17 with a single included mounting aperture 18 is attached to each inner surface of the first and second edge pieces, 15 and 16.

The top portion 20 and the bottom portion 30 are vertically separated from each other, thus forming a horizontal channel along which movable clamp components 50 are capable of traveling. Located in the base element is an insertion slot 24. Preferably the insertion slot 24 is centrally located intermediate between the top and bottom portion 20 and 30. The insertion slot 24 is used in the insertion or removal of the movable clamp components 50.

Each movable clamp component 50 comprises a holding element 55, a first leg 51 and a second leg 52. The holding element 55 is substantially C-shaped with two opposed arms, 53 and

54. The arms 53 and 54 are attached to each other at proximate ends by a semi-flexible segment 56, while distal ends of the arms curve outward. The flexible segment 56 may be a thin-walled living hinge, but, in the preferred embodiment, has approximately the same thickness at the distal ends of the holding element 55 and acts as a stiff restoring force opposed to those crated by flexation of the two arms, 53 and 54.

The first and second legs, 51 and 52, are attached to the holding element 55 near the proximate ends of the arms 53 and 54, on either side of the flexible segment 56. The first and second legs, 51 and 52, are substantially parallel to each other. Furthermore, as can be seen from the drawings, in the preferred embodiment, the first and second legs, 51 and 52, attached to a substantive part of each arm 53 and 54, respectively. Located near terminal ends of the first and second legs, 51 and 52, are at least one, preferably two, incised slots 57. The slots 97 are wide enough to accommodate the interior edges of the top portion 20 and the bottom portion 30 and allow the clamp component 50 to be repositioned freely.

When received by the surface mounting base 10, each of the clamp components 50 is capable of traveling the length of the surface mounting base 10 along the horizontal channel formed by the top portion 20 and the bottom portion 30. One of the primary advantages of the present invention is that individual clamp components 50 may be freely and easily inserted or removed from the surface mounting base 10. Thus, a user may supplement or reduce the clamping capability by inserting additional clamp components 50 into the surface mounting base 10.

In use, the surface mounting base 10 is attached to a surface, such as a wall, by attachment means, such as screws or nails. Alternatively, the base 10 may be attached by

suitable adhesives such as a double sided adhesive. An object is then pushed into the clamp component 50. Restoring forces in the semi-flexible arms, 53 and 54 and in the semi-flexible segment 56 apply pressure onto the item sufficient to secure it into place. Additional clamping components 50 may be added by inserting a leg member, such as the first leg member 53, into
5 and parallel to the channel formed by the top portion 20 and the bottom portion 30 and partially rotating the clamp component 50 vertically, followed by inserting a first end of a second leg member, such as the second leg member 54, into the channel and inserting a second end of the second leg member through the insertion slot 24 and further rotating the clamp component 50 into the vertical position. Consequently, the clamp component may be removed by reversing the
10 above described process.

In an other embodiment, one of the first or second end pieces 15 or 16 may be flexibly attached and is adapted to be bent outward to provide an opening designed to receive the clamp component 50. In this embodiment, a fastening means would be included on the flexibly attached end piece to secure the end in place when the device is in use.

15 The preferred embodiment of the invention is described above in the Drawings and Description of Preferred Embodiments. While these descriptions directly describe the above embodiments, it is understood that those skilled in the art may conceive modifications and/or variations to the specific embodiments shown and described herein. Any such modifications or variations that fall within the purview of this description are intended to be included therein as
20 well. Unless specifically noted, it is the intention of the inventor that the words and phrases in the specification and claims be given the ordinary and accustomed meanings to those of ordinary skill in the applicable art(s). The foregoing description of a preferred embodiment and best mode of the invention known to the applicant at the time of filing the application has been

presented and is intended for the purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise form disclosed, and many modifications and variations are possible in the light of the above teachings. The embodiment was chosen and described in order to best explain the principles of the invention and its practical application and to enable others skilled in the art to best utilize the invention in various embodiments and with various modifications as are suited to the particular use contemplated.